

WHAT IS CLAIMED IS:

- 1 1. An apparatus configured to improve sound quality for a sound
2 generator, comprising:
3 a processing device;
4 a memory coupled to the processing device;
5 a sound generator coupled to the processing device; and
6 a program residing in memory and configured to be run on the
7 processing device, the program configured to vary the output amplitude of the
8 sound generator depending on the sound generator frequency.
- 1 2. The apparatus of claim 1, wherein the sound generator is a
2 buzzer.
- 1 3. The apparatus of claim 1, wherein the program references a
2 look up table including information used to determine the magnitude to vary
3 the output amplitude of the sound generator.
- 1 4. The apparatus of claim 1, wherein the sound generator is
2 incorporated into a handheld computing device.
- 1 5. The apparatus of claim 1, wherein the sound generator is
2 incorporated into a personal digital assistant.
- 1 6. The apparatus of claim 1, wherein the program is configured to
2 provide a flattened frequency response of the sound generator.
- 1 7. The apparatus of claim 1, wherein the sound generator is
2 incorporated into a mobile electronic device.
- 1 8. A sound generator circuit, comprising:
2 a processor;
3 a memory coupled to the processor;
4 a modulator circuit coupled to the processor;

5 a transistor coupled the modulator circuit;
6 a sound generator coupled to the transistor; and
7 a program residing in memory and configured to be run on the
8 processor, the program configured to vary the output amplitude of the sound
9 generator depending on the sound generator frequency.

1 9. The sound generator circuit of claim 9, wherein the transistor is
2 a darlington transistor.

1 10. The sound generator circuit of claim 9, wherein the sound
2 generator circuit is configured to be used in a personal digital assistant.

1 11. The sound generator circuit of claim 9, wherein the sound
2 generator circuit is configured to be used with a mobile electronic device.

1 12. The sound generator circuit of claim 9, wherein the sound
2 generator is a buzzer.

1 13. The sound generator circuit of claim 9, wherein the sound
2 generator is a Bujon sound generator.

1 14. The sound generator circuit of claim 9, wherein the sound
2 generator is a Citizen sound generator.

1 15. A method of improving sound quality for a sound generator,
2 comprising:
3 providing a signal indicative of a sound frequency to be
4 generated;
5 accessing a look up table according to the sound frequency
6 to be generated to obtain volume adjustment information;
7 providing the current volume setting; and
8 adjusting the volume based on the volume adjustment
9 information.

1 16. The method of claim 15, further comprising:
2 scaling the volume adjustment information based on the
3 current volume setting to obtain a scaled volume adjustment.

1 17. The method of claim 16, further comprising:
2 subtracting the scaled volume adjustment from the current
3 volume setting to obtain a desired volume setting.

1 18. The method of claim 17 further comprising:
2 setting the volume to the desired volume setting.

1 19. The method of claim 18 further comprising:
2 generating a sound at the sound frequency to be generated.

1 20. A method of improving sound quality for a sound generator,
2 comprising:
3 providing a signal indicative of a sound frequency to be
4 generated;
5 calculating volume adjustment information according to the
6 sound frequency to be generated;
7 providing the current volume setting; and
8 adjusting the volume based on the volume adjustment
9 information.